

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference  01307-0010P1	<b>FOR FURTHER ACTION</b>		see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No.  PCT/US2009/065764	International filing date (day/month/year)  24/11/2009	(Earliest) Priority Date (day/month/year)  24/11/2008	
Applicant  ACRYMED, INC.			

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed  
☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant  
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1  
☒ as suggested by the applicant  
☐ as selected by this Authority, because the applicant failed to suggest a figure  
☐ as selected by this Authority, because this figure better characterizes the invention
- b. ☐ none of the figures is to be published with the abstract

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/065764

A. CLASSIFICATION OF SUBJECT MATTER  
 INV. A61F13/02 A61L15/00  
 ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61F A61L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 833 665 A (BOOTMAN MATTHEW [US] ET AL) 10 November 1998 (1998-11-10)  column 1, line 65 - column 2, line 60 column 3, lines 40-54 column 5, line 6 - column 6, line 36 claims 1-18	1-9, 17-29, 31,37
X	DE 196 31 421 A1 (BEIERSDORF AG [DE]) 12 February 1998 (1998-02-12)  column 1, lines 3-5 column 2, lines 20-36 column 3, lines 14-33  ----- -/--	1-3, 6-12,17, 18,37

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

16 April 2010

Date of mailing of the international search report

28/04/2010

Name and mailing address of the ISA/

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Authorized officer

Beins, Ulrika

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/065764

## C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 908 693 A (DELGADO JOAQUIN [US] ET AL) 1 June 1999 (1999-06-01) column 2, lines 41-50 column 3, lines 18-25 column 3, lines 59-65 column 8, lines 30-64 column 9, lines 8-17 column 9, lines 44-54	1-9
X	US 2004/082925 A1 (PATEL HARISH A [US]) 29 April 2004 (2004-04-29)  page 3, paragraph 31-39 page 4, paragraph 44-51	1-3, 9-14, 17-21
X	US 7 189 410 B1 (DROHAN WILLIAM N [US] ET AL) 13 March 2007 (2007-03-13)  claims 1,5,8-11,17,18	1-4,6, 9-12, 17-19
X	WO 2007/127236 A2 (ACRYMED INC [US]; MCMACKEN JACK D [US]; GIBBINS BRUCE L [US]) 8 November 2007 (2007-11-08) pages 2,5-10	1-5,17, 18
X	US 5 407 685 A (MALCHESKY PAUL S [US] ET AL) 18 April 1995 (1995-04-18)  claims 1-9,13,21,22	1-7, 9-12, 17-20,37
X	US 5 695 777 A (DONOVAN MAURA G [US] ET AL) 9 December 1997 (1997-12-09) column 4, lines 56-63 claims 1,3,4	1,2,4,6, 9,10,37
A	US 6 605 751 B1 (GIBBINS BRUCE L [US] ET AL) 12 August 2003 (2003-08-12) the whole document	1-37

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2009/065764

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5833665	A	10-11-1998	NONE
DE 19631421	A1	12-02-1998	AU 716910 B2 09-03-2000 AU 3244597 A 12-02-1998 EP 0826348 A2 04-03-1998 US 6160196 A 12-12-2000
US 5908693	A	01-06-1999	AU 685321 B2 15-01-1998 AU 3596395 A 31-05-1996 BR 9509599 A 06-01-1998 CA 2202264 A1 17-05-1996 CN 1162268 A 15-10-1997 DE 69528075 D1 10-10-2002 DE 69528075 T2 07-08-2003 EP 0789596 A1 20-08-1997 ES 2178678 T3 01-01-2003 JP 10508520 T 25-08-1998 WO 9614094 A1 17-05-1996 US 5614310 A 25-03-1997
US 2004082925	A1	29-04-2004	AU 2003287080 A1 13-05-2004 BR 0315428 A 16-08-2005 EP 1555980 A2 27-07-2005 JP 2006503647 T 02-02-2006 KR 20050083804 A 26-08-2005 MX PA05003802 A 08-06-2005 WO 2004037115 A2 06-05-2004
US 7189410	B1	13-03-2007	NONE
WO 2007127236	A2	08-11-2007	EP 2015722 A2 21-01-2009 US 2007293800 A1 20-12-2007
US 5407685	A	18-04-1995	NONE
US 5695777	A	09-12-1997	NONE
US 6605751	B1	12-08-2003	NONE

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2009/065764

International filing date (day/month/year)  
24.11.2009

Priority date (day/month/year)  
24.11.2008

International Patent Classification (IPC) or both national classification and IPC  
INV. A61F13/02 A61L15/00

Applicant  
ACRYMED, INC.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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D-80298 Munich  
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Date of completion of  
this opinion

see form  
PCT/ISA/210

Authorized Officer

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2009/065764

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
  - a. (means)
    - ☐ on paper,
    - ☐ in electronic form
  - b. (time)
    - ☐ in the international application as filed
    - ☐ together with the international application in electronic form
    - ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments: .

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	<u>15, 16, 30, 32-36</u>
	No: Claims	<u>1-14, 17-29, 31, 37</u>
Inventive step (IS)	Yes: Claims	<u>15, 16, 30, 32-36</u>
	No: Claims	<u>1-14, 17-29, 31, 37</u>
Industrial applicability (IA)	Yes: Claims	<u>1-37</u>
	No: Claims	

2. Citations and explanations

see separate sheet

1. Reference is made to the following documents:

- D1 US 5 833 665 A (BOOTMAN MATTHEW [US] ET AL) 10 November 1998 (1998-11-10)
- D2 DE 196 31 421 A1 (BEIERSDORF AG [DE]) 12 February 1998 (1998-02-12)
- D3 US 5 908 693 A (DELGADO JOAQUIN [US] ET AL) 1 June 1999 (1999-06-01)
- D4 US 2004/082925 A1 (PATEL HARISH A [US]) 29 April 2004 (2004-04-29)
- D5 US 7 189 410 B1 (DROHAN WILLIAM N [US] ET AL) 13 March 2007 (2007-03-13)
- D6 WO 2007/127236 A2 (ACRYMED INC [US]; MCMAKEN JACK D [US]; GIBBINS BRUCE L [US]) 8 November 2007 (2007-11-08)
- D7 US 5 407 685 A (MALCHESKY PAUL S [US] ET AL) 18 April 1995 (1995-04-18)
- D8 US 5 695 777 A (DONOVAN MAURA G [US] ET AL) 9 December 1997 (1997-12-09)

2. The application does not meet the requirements of Article 6 PCT, because the claims are not clear.

2.1 It is not clear what is meant with "binder". Is it a binder to bind the antimicrobial agent or is it an adhesive?

2.2 From the whole description and examples it is clear that the second layer is an adhesive layer. Therefore, claim 1 should be restricted to an adhesive layer. This is also necessary, since the independent method claim 22 refers to an adhesive and the independent claims should be consistent.

2.3 The term "substantially" in the claims is not clear and should be deleted.

2.4 Terms like "optionally" do not provide any limitation to the claims.

3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

3.1 Concerning independent claim 1, D1 discloses:

A laminate construct comprising at least one antimicrobial layer comprising at least one antimicrobial agent and a binder, and a second layer (column 1, line 65 - column 2, line 60).

D2 (column 1, lines 3-5; column 2, lines 20-36; column 3, lines 14-33), D3 (column 2, lines 41-50; column 3, lines 18-25; column 3, lines 59-65; column 8, lines 30-64; column 9, lines 8-17; column 9, lines 44-54), D4 (page 3, paragraph 31-39; page 4, paragraph 44-51), D5 (claims 1,5,8-11,17,18), D6 (pages 2,5-10), D7 (claims 1-9,13,21,22) and D8 (column 4, lines 56-63; claims 1,3,4) also disclose the subject-matter of claim 1.

3.2 Concerning independent claim 22, D1 discloses:

A method of making a laminate construct comprising,

- a. Applying an antimicrobial composition to a structural element to form a coating on the structural element (col. 6, l. 13-36);
- b. Removing at least a portion of one or more solvents from the antimicrobial composition to form an antimicrobial layer (col. 6, l. 13-36);
- c. Applying an adhesive composition to the outer surface of the antimicrobial layer (col. 6, l. 13-36);
- d. Removing at least a portion of one or more solvents from the adhesive composition to form an adhesive layer (col. 6, l. 13-36); and
- e. Optionally, adding a second structural element to cover the adhesive layer (see point 2.4 above).

3.3 Concerning independent claim 37, D1 discloses:

An article comprising a laminate construct of Claim 1 (column 1, line 65 - column 2, line 60).

4. Dependent claims 2-14,17-21,23-29,31 does not appear to contain any additional features which, in combination with the features of any claim to which it refers, meet the requirements of the PCT in respect of novelty and/or inventive step, the reasons being as follows:

D1 (column 1, line 65 - column 2, line 60; column 3, lines 40-54; column 5, line 6 - column 6, line 36; claims 1-18) already discloses the subject-matter of claims 2-9,17-21,23-29,31. D2 (column 1, lines 3-5; column 2, lines 20-36; column 3, lines 14-33) already discloses the subject-matter of claims 2,3,6-12,17,18. D3 (column 2,



lines 41-50; column 3, lines 18-25; column 3, lines 59-65; column 8, lines 30-64; column 9, lines 8-17; column 9, lines 44-54) already discloses the subject-matter of claims 2-9. D4 (page 3, paragraph 31-39; page 4, paragraph 44-51) already discloses the subject-matter of claims 2,3,9-14,17-21. D5 (claims 1,5,8-11,17,18) already discloses the subject-matter of claims 2-4,6,9-12,17-19. D6 (pages 2,5-10) already discloses the subject-matter of claims 2-5,17,18. D7 (claims 1-9,13,21,22) already discloses the subject-matter of claims 2-7,9-12,17-20. D8 (column 4, lines 56-63; claims 1,3,4) already discloses the subject-matter of claims 2,4,6,9,10.